

Application No. 09/693,377
Amendment "C" dated February 10, 2006
Reply to Office Action mailed October 11, 2005

BEST AVAILABLE COPY**REMARKS**

These remarks and the accompanying amendments are responsive to the Office Action made final and dated October 11, 2005 (hereinafter referred to as the "Office Action"). At the time of the last examination, Claims 12-23 were pending, of which Claims 12, 13, 15, 16, 18, 21 and 22 are independent and are amended herein.

Section 2 of the Office Action rejected Claims 12, 15-17 and 21-23 under 35 U.S.C. 103(a) as being unpatentable over United States patent number 6,285,655 issued to Lundby et al. (the patent hereinafter referred to simply as "Lundby") in view of United States Reissue patent application serial number US RE37,420 E reissued to Asano et al. (the patent hereinafter referred to simply as "Asano").

In contrast to independent Claims 12, 15, 16, 21 and 22, Lundby discloses that summers 240 sum signals from all traffic channels 212 and pilot channel 232, which are spread by Walsh sequence. Each modulator and transmitter 114 spreads the summed signals by short PN sequence to transmit.

However, Lundby does not disclose that the transmitted signals are not spread by orthogonal codes (channelization codes) for implementing channel division and spreading codes (scrambling codes) for implementing cell division. In addition, Lundby does not disclose that each of channel groups divided by the spread codes as scrambling, codes includes the pilot channel. That is, although each of summer 240 includes one channel group having the pilot channel in Lundby, Lundby does not disclose that each of summer 240 includes a plurality of channel groups. Accordingly, Lundby does not disclose that the pilot channel is located for each channel group which is included in same summer.

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Independent Claims 12, 15, 16, 21 and 22 each recite that signals spread by the orthogonal codes included each orthogonal codes set are summed up to combine for each orthogonal codes set, then the signals which were summed up to combine are spread by the spreading code for each orthogonal codes set to sum up to combine signals spread by the spreading code. Accordingly, in these independent claims, transmitted signals include the plurality of channel groups, wherein each of the channel group has the pilot channel (See Fig.4 of the present invention).

Accordingly, an effect which is not disclosed in Lundby, that "when a mobile station conducts the interference measurement with the channel carrying out the transmission power control, it can achieve the interference power measurement using the pilot channel belonging to the same orthogonal code set as that channel, making possible to improve the accuracy of the transmission power control" (referred to the description on page 7, lines 1 to 7) is obtained from these independent claims.

On the other hand, Asano discloses that spread codes resulting from multiplication of m orthogonal spread codes and a first PN series (PN(t)) are assigned to channel number #1 to #m in the same cell, and spread codes resulting from multiplication of the same m orthogonal spread codes as above and a second PN series (PN(t- ϕ)) are assigned to channel numbers #(m+1) to #2m.

However, Asano does not disclose that each of the channel group divided by the spreading codes has the pilot channel.

In addition, even if Lundby and Asano are combined, the appropriateness of which still not being conceded by the applicants, a first channel group spread by PN(t) series and a second channel group spread by PN(t- ϕ) series are created and the number of channel can be increased

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in one summer of Lundby. However, even if Lundby and Asano are combined, one skill in the art can not reach to an idea that the pilot channel is located in each of the first channel group and the second group, i.e., each of the first channel group and the second channel group have the pilot channel.

Accordingly, Claims 12, 15, 16, 21 and 22 are not unpatentable over Lundby in view of Asano. Claims 17 and 23 depend respectively from Claims 16 and 22, and are also thus not unpatentable over Lundby in view of Asano for at least the reasons provided for Claims 16 and 22. Therefore, the 35 U.S.C. 103(a) rejection of Claims 12, 15-17 and 21-23 should be withdrawn.

Section 3 of the Office Action rejects Claims 13, 14, 18, 19 and 20 under 35 U.S.C. 103(a) as being unpatentable over Lundby in view of Asano, and further in view of United States patent number 6,094,450 issued to Shockey (the patent hereinafter referred to as Shockey).

Shockey discloses that a pilot PN sequence generator 14 is controlled by a PN clock 18 which operates at a higher frequency than a data bit rate from a data source 26. However, Shockey does not disclose that each of the channel group divided by the spreading codes has the pilot channel, which feature is also not taught or suggested by Lundby and Asano. Since Claims 13 and 18 recite this missing feature, Claims 13 and 18 are not unpatentable over even the combination of Lundby, Asano, and Shockey, even though the appropriate of such a combination is not conceded by the applicants. Accordingly, Claims 13 and 18 (and their associated dependent claims) are not unpatentable over these references. Therefore, the 35 U.S.C. 103(a) rejection of Claims 13, 14 and 18-20 is requested.

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Therefore, prompt favorable action is respectfully requested. Should there be any further question regarding this response or matter for which a telephone communication may resolve further issues, the Examiner is respectfully invited to contact the undersigned.

Dated this 10th day of February, 2006.

Respectfully submitted,



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